



Analytical Resources, Incorporated
Analytical Chemists and Consultants

28 May 2015

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502

RE: Slip 1 Allocation
ARI Job: AFO5

Dear Craig:

Please find enclosed the original Chain-of-Custody (COC) records, sample receipt documentation, and the final results for the samples from the project referenced above. Five sediment samples were received on May 6, 2015. The samples were analyzed for grain size, total metals and bulk density as requested. The analyses for grain size and bulk density were sub-contracted to Amtest Laboratories in Kirkland, WA.

The metals analyses proceeded without incident of note.

An electronic copy of these reports will remain on file with ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
markh@arilabs.com
206/695-6210

Enclosures

cc: File AFO5

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: AF05	Turn-around Requested ASAP	Page: 1 of 1
ARI Client Company INTEGRAL	Phone: 360-705-3534	Date 5-6-15
Client Contact: CRAIG HUTCHINGS		Ice Present? NO
		No. of Coolers 1
		Cooler Temps:



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Client Project Name SLIP 1 ALLOCATION					Analysis Requested					Notes/Comments		
Client Project # C1246		Samplers B. SACKMANN, B. LEONARD			METALS Hg	GRAIN SIZE	BULK DENSITY ON SIEVED SAMPLES					
Sample ID	Date	Time	Matrix	No Containers								
SL1-PIS-SD-01	5-6-15	13:45	SED	2	X	X	X					
SL1-PIS-SD-02	5-6-15	14:15	SED	2	X	X	X					
SL1-PIS-SD-03	5-6-15	14:27	SED	2	X	X	X					
SL1-PIS-SD-04	5-6-15	14:38	SED	2	X	X	X					
SL1-PIS-SD-05	5-6-15	14:52	SED	2	X	X	X					
Comments/Special Instructions HOLD BULK DENSITY SAMPLES UNTIL GRAIN SIZE RESULTS ARE AVAILABLE.					Relinquished by (Signature)		Received by (Signature)		Relinquished by (Signature)		Received by (Signature)	
					Printed Name BRANDON SACKMANN		Printed Name A. Vulgarde		Printed Name		Printed Name	
					Company INTEGRAL CONSULTING INC		Company ARI		Company		Company	
					Date & Time 5-6-15 17:18		Date & Time 5/6/15 17:18		Date & Time		Date & Time	

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



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Cooler Receipt Form

ARI Client Integral
COC No(s) _____ (NA)
Assigned ARI Job No AECS

Project Name Step 4 Slu21 Allocation
Delivered by Fed-Ex UPS Courier Hand Delivered Other _____
Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
Were custody papers included with the cooler? YES NO
Were custody papers properly filled out (ink, signed, etc.) YES NO
Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry) 224
Time 1718
If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 9087745-2

Cooler Accepted by A Date 5/6/15 Time 1718

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)
What kind of packing material was used? ... (Bubble Wrap) Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
Was sufficient ice used (if appropriate)? NA YES (NO)
Were all bottles sealed in individual plastic bags? YES NO
Did all bottles arrive in good condition (unbroken)? YES NO
Were all bottle labels complete and legible? YES NO
Did the number of containers listed on COC match with the number of containers received? YES NO
Did all bottle labels and tags agree with custody papers? YES NO
Were all bottles used correct for the requested analyses? YES NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs).. NA YES NO
Were all VOC vials free of air bubbles? NA YES NO
Was sufficient amount of sample sent in each bottle? YES NO
Date VOC Trip Blank was made at ARI NA
Was Sample Split by ARI NA YES Date/Time _____ Equipment: _____ Split by _____

Samples Logged by A Date 5/7/15 Time 1033

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By _____ Date _____

Small Air Bubbles ~ 2mm 	Peabubbles 2-4 mm 	LARGE Air Bubbles > 4 mm 	Small → "sm" (< 2 mm) Peabubbles → "pb" (2 to < 4 mm) Large → "lg" (4 to < 6 mm) Headspace → "hs" (> 6 mm)
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0016F
3/2/10

Cooler Receipt Form

Revision 014

AFOS - 000002

MANSON009809

Sample ID Cross Reference Report



ARI Job No: AFO5
Client: Integral Consulting
Project Event: C1246
Project Name: Slip 1 Allocation

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SL1-PIS-SD-01	AFO5A	15-8863	Sediment	05/06/15 13:45	05/06/15 17:18
2. SL1-PIS-SD-02	AFO5B	15-8864	Sediment	05/06/15 14:15	05/06/15 17:18
3. SL1-PIS-SD-03	AFO5C	15-8865	Sediment	05/06/15 14:27	05/06/15 17:18
4. SL1-PIS-SD-04	AFO5D	15-8866	Sediment	05/06/15 14:38	05/06/15 17:18
5. SL1-PIS-SD-05	AFO5E	15-8867	Sediment	05/06/15 14:52	05/06/15 17:18.



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Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



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- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" (**Dioxin/Furan analysis only**)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. (**Dioxin/Furan analysis only**)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. (**Dioxin/Furan analysis only**)



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: SL1-PIS-SD-01

SAMPLE

Lab Sample ID: AF05A

LIMS ID: 15-8863

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AF05-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: 05/06/15

Date Received: 05/06/15

Percent Total Solids: 84.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/08/15	6010C	05/12/15	7429-90-5	Aluminum	60	17,300	
3050B	05/08/15	6010C	05/12/15	7440-36-0	Antimony	60	1,490	
3050B	05/08/15	6010C	05/12/15	7440-38-2	Arsenic	60	6,280	
3050B	05/08/15	6010C	05/12/15	7440-39-3	Barium	3	484	
3050B	05/08/15	6010C	05/12/15	7440-41-7	Beryllium	1	5	
3050B	05/08/15	6010C	05/12/15	7440-43-9	Cadmium	2	8	
3050B	05/08/15	6010C	05/12/15	7440-70-2	Calcium	60	50,900	
3050B	05/08/15	6010C	05/12/15	7440-47-3	Chromium	6	176	
3050B	05/08/15	6010C	05/12/15	7440-48-4	Cobalt	3	293	
3050B	05/08/15	6010C	05/12/15	7440-50-8	Copper	2	3,790	
3050B	05/08/15	6010C	05/12/15	7439-89-6	Iron	60	202,000	
3050B	05/08/15	6010C	05/12/15	7439-92-1	Lead	20	3,650	
3050B	05/08/15	6010C	05/12/15	7439-95-4	Magnesium	60	8,990	
3050B	05/08/15	6010C	05/12/15	7439-96-5	Manganese	1	1,200	
CLP	05/08/15	7471A	05/11/15	7439-97-6	Mercury	0.02	0.15	
3050B	05/08/15	6010C	05/12/15	7439-98-7	Molybdenum	6	722	
3050B	05/08/15	6010C	05/12/15	7440-02-0	Nickel	10	70	
3050B	05/08/15	6010C	05/12/15	7440-09-7	Potassium	570	4,380	
3050B	05/08/15	6010C	05/12/15	7782-49-2	Selenium	60	60	U
3050B	05/08/15	6010C	05/12/15	7440-22-4	Silver	3	6	
3050B	05/08/15	6010C	05/12/15	7440-23-5	Sodium	570	6,720	
3050B	05/08/15	6010C	05/12/15	7440-28-0	Thallium	60	60	U
3050B	05/08/15	6010C	05/12/15	7440-31-5	Tin	10	390	
3050B	05/08/15	6010C	05/12/15	7440-62-2	Vanadium	3	56	
3050B	05/08/15	6010C	05/12/15	7440-66-6	Zinc	10	15,600	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: SL1-PIS-SD-02

SAMPLE

Lab Sample ID: AF05B

LIMS ID: 15-8864

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AF05-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: 05/06/15

Date Received: 05/06/15

Percent Total Solids: 83.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/08/15	6010C	05/12/15	7429-90-5	Aluminum	60	11,900	
3050B	05/08/15	6010C	05/12/15	7440-36-0	Antimony	60	1,180	
3050B	05/08/15	6010C	05/12/15	7440-38-2	Arsenic	60	5,590	
3050B	05/08/15	6010C	05/12/15	7440-39-3	Barium	3	227	
3050B	05/08/15	6010C	05/12/15	7440-41-7	Beryllium	1	8	
3050B	05/08/15	6010C	05/12/15	7440-43-9	Cadmium	2	8	
3050B	05/08/15	6010C	05/12/15	7440-70-2	Calcium	60	32,900	
3050B	05/08/15	6010C	05/12/15	7440-47-3	Chromium	6	221	
3050B	05/08/15	6010C	05/12/15	7440-48-4	Cobalt	3	265	
3050B	05/08/15	6010C	05/12/15	7440-50-8	Copper	2	2,200	
3050B	05/08/15	6010C	05/12/15	7439-89-6	Iron	60	172,000	
3050B	05/08/15	6010C	05/12/15	7439-92-1	Lead	20	2,870	
3050B	05/08/15	6010C	05/12/15	7439-95-4	Magnesium	60	7,790	
3050B	05/08/15	6010C	05/12/15	7439-96-5	Manganese	1	739	
CLP	05/08/15	7471A	05/11/15	7439-97-6	Mercury	0.02	0.05	
3050B	05/08/15	6010C	05/12/15	7439-98-7	Molybdenum	6	745	
3050B	05/08/15	6010C	05/12/15	7440-02-0	Nickel	10	60	
3050B	05/08/15	6010C	05/12/15	7440-09-7	Potassium	560	2,720	
3050B	05/08/15	6010C	05/12/15	7782-49-2	Selenium	60	60	U
3050B	05/08/15	6010C	05/12/15	7440-22-4	Silver	3	4	
3050B	05/08/15	6010C	05/12/15	7440-23-5	Sodium	560	5,280	
3050B	05/08/15	6010C	05/12/15	7440-28-0	Thallium	60	60	U
3050B	05/08/15	6010C	05/12/15	7440-31-5	Tin	10	310	
3050B	05/08/15	6010C	05/12/15	7440-62-2	Vanadium	3	43	
3050B	05/08/15	6010C	05/12/15	7440-66-6	Zinc	10	14,400	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: SL1-PIS-SD-03

SAMPLE

Lab Sample ID: AF05C

LIMS ID: 15-8865

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AF05-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: 05/06/15

Date Received: 05/06/15

Percent Total Solids: 81.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/08/15	6010C	05/12/15	7429-90-5	Aluminum	10	11,900	
3050B	05/08/15	6010C	05/12/15	7440-36-0	Antimony	10	140	
3050B	05/08/15	6010C	05/12/15	7440-38-2	Arsenic	10	620	
3050B	05/08/15	6010C	05/12/15	7440-39-3	Barium	0.9	92.2	
3050B	05/08/15	6010C	05/12/15	7440-41-7	Beryllium	0.3	0.5	
3050B	05/08/15	6010C	05/12/15	7440-43-9	Cadmium	0.6	1.3	
3050B	05/08/15	6010C	05/12/15	7440-70-2	Calcium	10	9,140	
3050B	05/08/15	6010C	05/12/15	7440-47-3	Chromium	1	43	
3050B	05/08/15	6010C	05/12/15	7440-48-4	Cobalt	0.9	35.2	
3050B	05/08/15	6010C	05/12/15	7440-50-8	Copper	0.6	361	
3050B	05/08/15	6010C	05/12/15	7439-89-6	Iron	10	50,800	
3050B	05/08/15	6010C	05/12/15	7439-92-1	Lead	6	433	
3050B	05/08/15	6010C	05/12/15	7439-95-4	Magnesium	10	5,910	
3050B	05/08/15	6010C	05/12/15	7439-96-5	Manganese	0.3	624	
CLP	05/08/15	7471A	05/11/15	7439-97-6	Mercury	0.03	0.13	
3050B	05/08/15	6010C	05/12/15	7439-98-7	Molybdenum	1	70	
3050B	05/08/15	6010C	05/12/15	7440-02-0	Nickel	3	31	
3050B	05/08/15	6010C	05/12/15	7440-09-7	Potassium	150	1,160	
3050B	05/08/15	6010C	05/12/15	7782-49-2	Selenium	10	10	U
3050B	05/08/15	6010C	05/12/15	7440-22-4	Silver	0.9	0.9	U
3050B	05/08/15	6010C	05/12/15	7440-23-5	Sodium	150	3,160	
3050B	05/08/15	6010C	05/12/15	7440-28-0	Thallium	10	10	U
3050B	05/08/15	6010C	05/12/15	7440-31-5	Tin	3	37	
3050B	05/08/15	6010C	05/12/15	7440-62-2	Vanadium	0.9	50.7	
3050B	05/08/15	6010C	05/12/15	7440-66-6	Zinc	3	1,580	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

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Sample ID: SL1-PIS-SD-04

SAMPLE

Lab Sample ID: AFO5D

LIMS ID: 15-8866

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AFO5-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: 05/06/15

Date Received: 05/06/15

Percent Total Solids: 77.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/08/15	6010C	05/12/15	7429-90-5	Aluminum	60	14,400	
3050B	05/08/15	6010C	05/12/15	7440-36-0	Antimony	60	1,450	
3050B	05/08/15	6010C	05/12/15	7440-38-2	Arsenic	60	6,420	
3050B	05/08/15	6010C	05/12/15	7440-39-3	Barium	4	308	
3050B	05/08/15	6010C	05/12/15	7440-41-7	Beryllium	1	5	
3050B	05/08/15	6010C	05/12/15	7440-43-9	Cadmium	2	10	
3050B	05/08/15	6010C	05/12/15	7440-70-2	Calcium	60	35,800	
3050B	05/08/15	6010C	05/12/15	7440-47-3	Chromium	6	190	
3050B	05/08/15	6010C	05/12/15	7440-48-4	Cobalt	4	283	
3050B	05/08/15	6010C	05/12/15	7440-50-8	Copper	2	2,760	
3050B	05/08/15	6010C	05/12/15	7439-89-6	Iron	60	196,000	
3050B	05/08/15	6010C	05/12/15	7439-92-1	Lead	20	3,640	
3050B	05/08/15	6010C	05/12/15	7439-95-4	Magnesium	60	7,640	
3050B	05/08/15	6010C	05/12/15	7439-96-5	Manganese	1	824	
CLP	05/08/15	7471A	05/11/15	7439-97-6	Mercury	0.05	3.18	
3050B	05/08/15	6010C	05/12/15	7439-98-7	Molybdenum	6	755	
3050B	05/08/15	6010C	05/12/15	7440-02-0	Nickel	10	60	
3050B	05/08/15	6010C	05/12/15	7440-09-7	Potassium	610	3,470	
3050B	05/08/15	6010C	05/12/15	7782-49-2	Selenium	60	60	U
3050B	05/08/15	6010C	05/12/15	7440-22-4	Silver	4	5	
3050B	05/08/15	6010C	05/12/15	7440-23-5	Sodium	610	6,620	
3050B	05/08/15	6010C	05/12/15	7440-28-0	Thallium	60	60	U
3050B	05/08/15	6010C	05/12/15	7440-31-5	Tin	10	380	
3050B	05/08/15	6010C	05/12/15	7440-62-2	Vanadium	4	50	
3050B	05/08/15	6010C	05/12/15	7440-66-6	Zinc	10	16,800	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

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Sample ID: SL1-PIS-SD-05
SAMPLE

Lab Sample ID: AF05E

LIMS ID: 15-8867

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AF05-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: 05/06/15

Date Received: 05/06/15

Percent Total Solids: 61.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/08/15	6010C	05/12/15	7429-90-5	Aluminum	8	15,100	
3050B	05/08/15	6010C	05/12/15	7440-36-0	Antimony	8	11	
3050B	05/08/15	6010C	05/12/15	7440-38-2	Arsenic	8	56	
3050B	05/08/15	6010C	05/12/15	7440-39-3	Barium	0.5	46.8	
3050B	05/08/15	6010C	05/12/15	7440-41-7	Beryllium	0.2	0.2	
3050B	05/08/15	6010C	05/12/15	7440-43-9	Cadmium	0.3	1.1	
3050B	05/08/15	6010C	05/12/15	7440-70-2	Calcium	8	6,160	
3050B	05/08/15	6010C	05/12/15	7440-47-3	Chromium	0.8	39.1	
3050B	05/08/15	6010C	05/12/15	7440-48-4	Cobalt	0.5	9.8	
3050B	05/08/15	6010C	05/12/15	7440-50-8	Copper	0.3	112	
3050B	05/08/15	6010C	05/12/15	7439-89-6	Iron	8	33,300	
3050B	05/08/15	6010C	05/12/15	7439-92-1	Lead	3	95	
3050B	05/08/15	6010C	05/12/15	7439-95-4	Magnesium	8	6,660	
3050B	05/08/15	6010C	05/12/15	7439-96-5	Manganese	0.2	526	
CLP	05/08/15	7471A	05/11/15	7439-97-6	Mercury	0.03	0.13	
3050B	05/08/15	6010C	05/12/15	7439-98-7	Molybdenum	0.8	7.2	
3050B	05/08/15	6010C	05/12/15	7440-02-0	Nickel	2	36	
3050B	05/08/15	6010C	05/12/15	7440-09-7	Potassium	80	1,370	
3050B	05/08/15	6010C	05/12/15	7782-49-2	Selenium	8	8	U
3050B	05/08/15	6010C	05/12/15	7440-22-4	Silver	0.5	0.5	U
3050B	05/08/15	6010C	05/12/15	7440-23-5	Sodium	80	5,340	
3050B	05/08/15	6010C	05/12/15	7440-28-0	Thallium	8	8	U
3050B	05/08/15	6010C	05/12/15	7440-31-5	Tin	2	5	
3050B	05/08/15	6010C	05/12/15	7440-62-2	Vanadium	0.5	53.7	
3050B	05/08/15	6010C	05/12/15	7440-66-6	Zinc	2	309	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: AFO5MB

LIMS ID: 15-8867

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AFO5-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/08/15	6010C	05/12/15	7429-90-5	Aluminum	5	5	U
3050B	05/08/15	6010C	05/12/15	7440-36-0	Antimony	5	5	U
3050B	05/08/15	6010C	05/12/15	7440-38-2	Arsenic	5	5	U
3050B	05/08/15	6010C	05/12/15	7440-39-3	Barium	0.3	0.3	U
3050B	05/08/15	6010C	05/12/15	7440-41-7	Beryllium	0.1	0.1	U
3050B	05/08/15	6010C	05/12/15	7440-43-9	Cadmium	0.2	0.2	U
3050B	05/08/15	6010C	05/12/15	7440-70-2	Calcium	5	5	U
3050B	05/08/15	6010C	05/12/15	7440-47-3	Chromium	0.5	0.5	U
3050B	05/08/15	6010C	05/12/15	7440-48-4	Cobalt	0.3	0.3	U
3050B	05/08/15	6010C	05/12/15	7440-50-8	Copper	0.2	0.2	U
3050B	05/08/15	6010C	05/12/15	7439-89-6	Iron	5	5	U
3050B	05/08/15	6010C	05/12/15	7439-92-1	Lead	2	2	U
3050B	05/08/15	6010C	05/12/15	7439-95-4	Magnesium	5	5	U
3050B	05/08/15	6010C	05/12/15	7439-96-5	Manganese	0.1	0.1	U
CLP	05/08/15	7471A	05/11/15	7439-97-6	Mercury	0.02	0.02	U
3050B	05/08/15	6010C	05/12/15	7439-98-7	Molybdenum	0.5	0.5	U
3050B	05/08/15	6010C	05/12/15	7440-02-0	Nickel	1	1	U
3050B	05/08/15	6010C	05/12/15	7440-09-7	Potassium	50	50	U
3050B	05/08/15	6010C	05/12/15	7782-49-2	Selenium	5	5	U
3050B	05/08/15	6010C	05/12/15	7440-22-4	Silver	0.3	0.3	U
3050B	05/08/15	6010C	05/12/15	7440-23-5	Sodium	50	50	U
3050B	05/08/15	6010C	05/12/15	7440-28-0	Thallium	5	5	U
3050B	05/08/15	6010C	05/12/15	7440-31-5	Tin	1	1	U
3050B	05/08/15	6010C	05/12/15	7440-62-2	Vanadium	0.3	0.3	U
3050B	05/08/15	6010C	05/12/15	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: AF05LCS

LIMS ID: 15-8867

Matrix: Sediment

Data Release Authorized:

Reported: 05/13/15

QC Report No: AF05-Integral Consulting

Project: Slip 1 Allocation

C1246

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	211	200	106%	
Antimony	6010C	216	200	108%	
Arsenic	6010C	207	200	104%	
Barium	6010C	221	200	110%	
Beryllium	6010C	51.2	50.0	102%	
Cadmium	6010C	54.6	50.0	109%	
Calcium	6010C	1030	1000	103%	
Chromium	6010C	54.5	50.0	109%	
Cobalt	6010C	53.4	50.0	107%	
Copper	6010C	52.0	50.0	104%	
Iron	6010C	212	200	106%	
Lead	6010C	214	200	107%	
Magnesium	6010C	1080	1000	108%	
Manganese	6010C	50.7	50.0	101%	
Mercury	7471A	0.54	0.50	108%	
Molybdenum	6010C	52.6	50.0	105%	
Nickel	6010C	53	50	106%	
Potassium	6010C	1040	1000	104%	
Selenium	6010C	205	200	102%	
Silver	6010C	53.6	50.0	107%	
Sodium	6010C	1050	1000	105%	
Thallium	6010C	209	200	104%	
Tin	6010C	51	50	102%	
Vanadium	6010C	52.4	50.0	105%	
Zinc	6010C	51	50	102%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

*Professional
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Services*

May 11 2015
Analytical Resources Inc.
4611 S 134th Pl
Suite 100
Tukwila, WA 98168
Attention: Mark Harris

Dear Mark Harris:

Enclosed please find the analytical data for your Slip 1 Allocation project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
15-8863-AF05A	Soil	15-A006526	Sieve Analysis
15-8864-AF05B	Soil	15-A006527	Sieve Analysis
15-8865-AF05C	Soil	15-A006528	Sieve Analysis
15-8866-AF05D	Soil	15-A006529	Sieve Analysis
15-8867-AF05E	Soil	15-A006530	Sieve Analysis

Your samples were received on Thursday, May 7, 2015. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

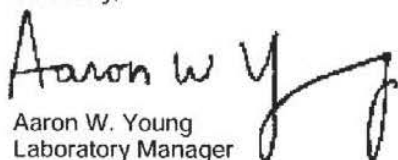
The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

PO Number: AF05

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT = Nutrients
DEM = Demand

MIN = Minerals

Am Test Inc.
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Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



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ANALYSIS REPORT

Analytical Resources Inc.
4611 S 134th Pl
Tukwila, WA 98168
Attention: Mark Harris
Project Name: Slip 1 Allocation
PO Number: AF05
All results reported on an as received basis.

Date Received: 05/07/15
Date Reported: 5/11/15

AMTEST Identification Number 15-A006526
Client Identification 15-8863-AF05A
Sampling Date 05/06/15, 13:45

Particle Size by Sieve Only

Sieve Number	Sieve Size	RESULT	UNITS	METHOD	ANALYST	DATE
3/4"	19 mm	1.77	% Retained	ASTM D422	ED	05/08/15
1/4"	6.3 mm	3.38	% Retained	ASTM D422	ED	05/08/15
# 4	4.75 mm	0.23	% Retained	ASTM D422	ED	05/08/15
# 10	2.0 mm	1.17	% Retained	ASTM D422	ED	05/08/15
# 20	0.85 mm	58.7	% Retained	ASTM D422	ED	05/08/15
# 40	0.425 mm	18.3	% Retained	ASTM D422	ED	05/08/15
# 60	0.25 mm	6.94	% Retained	ASTM D422	ED	05/08/15
# 140	0.105 mm	5.20	% Retained	ASTM D422	ED	05/08/15
# 200	0.075 mm	0.81	% Retained	ASTM D422	ED	05/08/15
% Passed		3.43	%	ASTM D422	ED	05/08/15

AMTEST Identification Number 15-A006527
Client Identification 15-8864-AF05B
Sampling Date 05/06/15, 14:15

Particle Size by Sieve Only

Sieve Number	Sieve Size	RESULT	UNITS	METHOD	ANALYST	DATE
3/4"	19 mm	1.86	% Retained	ASTM D422	ED	05/08/15
1/4"	6.3 mm	13.7	% Retained	ASTM D422	ED	05/08/15
# 4	4.75 mm	1.68	% Retained	ASTM D422	ED	05/08/15
# 10	2.0 mm	4.04	% Retained	ASTM D422	ED	05/08/15
# 20	0.85 mm	19.1	% Retained	ASTM D422	ED	05/08/15
# 40	0.425 mm	10.2	% Retained	ASTM D422	ED	05/08/15
# 60	0.25 mm	6.20	% Retained	ASTM D422	ED	05/08/15
# 140	0.105 mm	2.77	% Retained	ASTM D422	ED	05/08/15
# 200	0.075 mm	0.56	% Retained	ASTM D422	ED	05/10/15
% Passed		39.9	%	ASTM D422	ED	05/08/15

AMTEST Identification Number 15-A006528
Client Identification 15-8865-AF05C
Sampling Date 05/06/15, 14:27

Particle Size by Sieve Only

Sieve Number	Sieve Size	RESULT	UNITS	METHOD	ANALYST	DATE
3/4"	19 mm	9.00	% Retained	ASTM D422	ED	05/08/15
1/4"	6.3 mm	30.5	% Retained	ASTM D422	ED	05/08/15
# 4	4.75 mm	4.46	% Retained	ASTM D422	ED	05/08/15
# 10	2.0 mm	8.28	% Retained	ASTM D422	ED	05/08/15
# 20	0.85 mm	7.23	% Retained	ASTM D422	ED	05/08/15
# 40	0.425 mm	12.8	% Retained	ASTM D422	ED	05/08/15
# 60	0.25 mm	6.39	% Retained	ASTM D422	ED	05/08/15
# 140	0.105 mm	2.60	% Retained	ASTM D422	ED	05/08/15
# 200	0.075 mm	1.46	% Retained	ASTM D422	ED	05/08/15
% Passed		17.4	%	ASTM D422	ED	05/08/15

AMTEST Identification Number 15-A006529
Client Identification 15-8866-AF05D
Sampling Date 05/06/15, 14:38

Particle Size by Sieve Only

Sieve Number	Sieve Size	RESULT	UNITS	METHOD	ANALYST	DATE
3/4"	19 mm	0.00	% Retained	ASTM D422	ED	05/08/15
1/4"	6.3 mm	1.50	% Retained	ASTM D422	ED	05/08/15
# 4	4.75 mm	0.53	% Retained	ASTM D422	ED	05/08/15
# 10	2.0 mm	3.02	% Retained	ASTM D422	ED	05/08/15
# 20	0.85 mm	45.4	% Retained	ASTM D422	ED	05/08/15
# 40	0.425 mm	13.9	% Retained	ASTM D422	ED	05/08/15
# 60	0.25 mm	5.95	% Retained	ASTM D422	ED	05/08/15
# 140	0.105 mm	5.04	% Retained	ASTM D422	ED	05/08/15
# 200	0.075 mm	0.42	% Retained	ASTM D422	ED	05/08/15
% Passed		24.3	%	ASTM D422	ED	05/08/15

AMTEST Identification Number 15-A006530
Client Identification 15-8867-AF05E
Sampling Date 05/06/15, 14:52

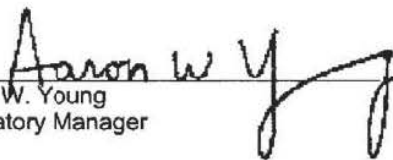
Particle Size by Sieve Only

Sieve Number	Sieve Size	RESULT	UNITS	METHOD	ANALYST	DATE
3/4"	19 mm	24.7	% Retained	ASTM D422	ED	05/08/15
1/4"	6.3 mm	23.0	% Retained	ASTM D422	ED	05/08/15
# 4	4.75 mm	4.18	% Retained	ASTM D422	ED	05/08/15
# 10	2.0 mm	5.62	% Retained	ASTM D422	ED	05/08/15
# 20	0.85 mm	4.01	% Retained	ASTM D422	ED	05/08/15
# 40	0.425 mm	5.25	% Retained	ASTM D422	ED	05/08/15
# 60	0.25 mm	4.09	% Retained	ASTM D422	ED	05/08/15
# 140	0.105 mm	2.79	% Retained	ASTM D422	ED	05/08/15
# 200	0.075 mm	0.27	% Retained	ASTM D422	ED	05/08/15
% Passed		26.1	%	ASTM D422	ED	05/08/15

Case Narrative:

No duplicates were analyzed because the entire sample was analyzed to obtain an accurate sample representation.

No further corrective action was taken.


Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com



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QC Summary for sample numbers: 15-A006526 to 15-A006530

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 05/07/15



ARI Project: AF05

Laboratory: Amtest Incorporated
Lab Contact: Kathy Fugiel
Lab Address: 13600 NE 126th Place
Kirkland, WA 98034
Phone: 425-885-1664
Fax:

ARI Client: Integral Consulting
Project ID: Slip 1 Allocation
ARI PM: Mark Harris
Phone: 206-695-6210
Fax: 206-695-6201
Email: subdata@arilabs.com

Analytical Protocol: PSDDA
Special Instructions:

Requested Turn Around: 05/09/15
Email Results (Y/N): Yes

Limits of Liability. Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
15-8863-AF05A	SL1-PIS-SD-01	05/06/15 13:45	Sediment	1	See CoC
Special Instructions: Grainsize, Hold Bulk Density/Pending Grainsize Results					
15-8864-AF05B	SL1-PIS-SD-02	05/06/15 14:15	Sediment	1	See CoC
Special Instructions: Grainsize, Hold Bulk Density/Pending Grainsize Results					
15-8865-AF05C	SL1-PIS-SD-03	05/06/15 14:27	Sediment	1	See CoC
Special Instructions: Grainsize, Hold Bulk Density/Pending Grainsize Results					
15-8866-AF05D	SL1-PIS-SD-04	05/06/15 14:38	Sediment	1	See CoC
Special Instructions: Grainsize, Hold Bulk Density/Pending Grainsize Results					
15-8867-AF05E	SL1-PIS-SD-05	05/06/15 14:52	Sediment	1	See CoC
Special Instructions: Grainsize, Hold Bulk Density/Pending Grainsize Results					

Carrier	Airbill	Date
Relinquished by	Company ARI	Date 5/7/15 Time 11:10
Received by	Company AmTest Lab	Date 5/7/15 Time 11:41

Subcontractor Custody Form - AF05
Page 1 of 1

T-9.12 P.8

AF05 00021

MANSON009828

RE: Sample Q

Subject: RE: Sample Q
From: "Aaron Young" <aarony@amtestlab.com>
Date: 4/30/2015 8:10 AM
To: "Mark Harris" <markh@arilabs.com>

Hi Mark

The only sieve we don't have is the 3/8" but we do have a 1/4" if we could substitute. Otherwise, no problem.

Have a great day!

Aaron Young
AmTest Vice President

ai

Take a quick [SURVEY](#) to help us improve our service.

From: Mark Harris [mailto:markh@arilabs.com]
Sent: Thursday, April 30, 2015 5:58 AM
To: Aaron Young
Subject: Re: Sample Q

Aaron:

This what they'd like:

For grain size we were thinking the following sieve sizes, but if Amtest can't do these what can they do?

Sieve size

3/4"	19.0 mm
3/8"	9.5 mm
4	>4.75 mm
10	>2 mm
20	>0.85 mm
40	>0.425 mm
60	>0.25 mm
140	>0.106 mm
200	>0.075 mm

2

Please confirm that you can do these.

Tentatively we'd get these next Wednesday or Thursday.

Mark H.

On 4/28/2015 7:17 AM, Aaron Young wrote:

Yes, we can do this for you. If they are looking for Sieves only the price is \$50 and I would request the sieve sizes they need as well. Bulk Density is \$15 per density test. If they need it on each fraction, I would charge \$15 per fraction.

Have a great day!

Aaron Young
AmTest Vice President

Take a quick [SURVEY](#) to help us improve our service.

MANSON009830

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

TST

LABORATORIES

Sample #	15-A006526		Weight Used	638.6	
Sieve	Tare Weight	Dry Weight	Weight Retained	% Retained	Bulk Density
3/4"	647.1	658.4	11.3	1.77	0.40
1/4"	549.6	571.2	21.6	3.38	0.72
4	535	536.5	1.5	0.23	0.38
10	490	497.5	7.5	1.17	0.75
20	435.9	810.9	375	58.72	1.84
40	361.8	478.9	117.1	18.34	1.58
60	359.2	403.5	44.3	6.94	1.38
140	334	367.2	33.2	5.20	1.38
200	334.7	339.9	5.2	0.81	0.65
			Total	96.57	
			% Passed	3.43	

Sample #	15-A006527		Weight Used	411.0	
Sieve	Tare Weight	Dry Weight	Weight Retained	% Retained	Bulk Density
3/4"	647.1	659	11.9	1.86	0.59
1/4"	549.6	637.3	87.7	13.73	1.25
4	535	545.7	10.7	1.68	0.89
10	489.9	515.7	25.8	4.04	0.99
20	435.6	557.5	121.9	19.09	1.74
40	361.5	426.4	64.9	10.16	1.48
60	359.2	398.8	39.6	6.20	1.41
140	334	351.7	17.7	2.77	1.11
200	334.7	338.3	3.6	0.56	1.80
			Total	60.10	
			% Passed	39.90	

Sample #	15-A006528		Weight Used	527.2	
Sieve	Tare Weight	Dry Weight	Weight Retained	% Retained	Bulk Density
3/4"	647.1	704.6	57.5	9.00	1.15
1/4"	549.4	743.9	194.5	30.46	1.34
4	535.8	564.3	28.5	4.46	1.10
10	489.8	542.7	52.9	8.28	1.65
20	435.6	481.8	46.2	7.23	1.18
40	361.2	442.6	81.4	12.75	1.31
60	359.3	400.1	40.8	6.39	1.41
140	334.1	350.7	16.6	2.60	0.98
200	334.7	344	9.3	1.46	1.03
			Total	82.63	
			% Passed	17.37	

AF05 00024

MANSON009831

T.M. LABORATORIES

Sample #	15-A006529		Weight Used 543.0		
Sieve	Tare Weight	Dry Weight	Weight Retained	% Retained	Bulk Density
3/4"	647.5	647.5	0	0.00	#DIV/0!
1/4"	549.5	559.1	9.6	1.50	0.80
4	535	538.4	3.4	0.53	0.34
10	490	509.3	19.3	3.02	1.29
20	435.9	725.6	289.7	45.36	1.57
40	361.7	450.3	88.6	13.87	2.11
60	359.3	397.3	38	5.95	2.38
140	334.1	366.3	32.2	5.04	1.11
200	334.7	337.4	2.7	0.42	0.67
			Total	75.71	
			% Passed	24.29	

Sample #	15-A006530		Weight Used 560.4		
Sieve	Tare Weight	Dry Weight	Weight Retained	% Retained	Bulk Density
3/4"	647.6	805.2	157.6	24.68	1.26
1/4"	549.4	696.3	146.9	23.00	1.34
4	535	561.7	26.7	4.18	1.21
10	489.9	525.8	35.9	5.62	1.06
20	435.7	461.3	25.6	4.01	0.80
40	361.6	395.1	33.5	5.25	0.93
60	359.4	385.5	26.1	4.09	0.87
140	334.1	351.9	17.8	2.79	0.20
200	334.8	336.5	1.7	0.27	0.85
			Total	73.88	
			% Passed	26.12	

15-A006529